

### The Problem

Largemouth bass can struggle to find quality spawning habitats in some rivers because of heavy silt loads, poor water stability, lack of protected coves, and few underwater structural elements. Structure may be added to such rivers to improve the availability of quality, spawning habitat.

### The Question

Do largemouth bass use nesting boxes for reproduction?



### Methods

Volunteers and MDDNR biologists built several types of nesting boxes and placed them in three farm ponds within MDDNR hatcheries. Biologists stocked each of these farm ponds with spawning-ready largemouth bass. Boxes were monitored daily for use. MDDNR biologists placed an additional 6 boxes in plain sight on the Choptank River to determine if they would stay in the river, despite tides and wind.

### Results

Largemouth bass generally moved along the bottom and entered shallow, edge areas to build nests and spawn. Bass were observed near the edge of one box on one day. Boxes with smaller walls, approximately 4 inches high, had bass moving within the box. Largemouth bass worked the rocks within these boxes. Bass appeared to use rocks rather than spawning mats, but both may be effective in rivers depending on available habitat.

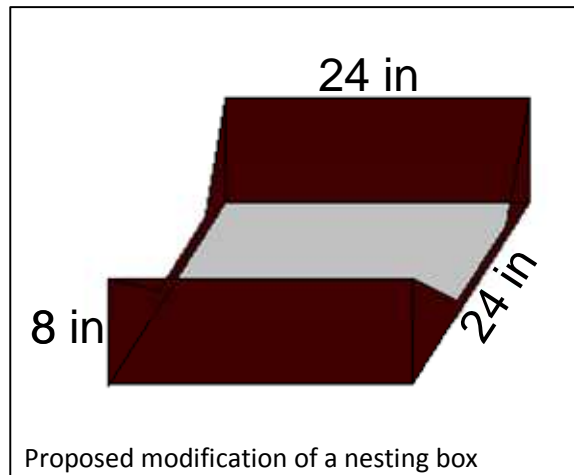
Fry production differed tremendously among ponds because of differences in available food, water temperature, and the onset of spawning. Because of these other factors, the presence of boxes in the ponds did not appear to improve fry production.

None of the boxes that were placed within the Choptank River drifted downstream. Most remained stationary. Because the boxes were exposed during low tide, they were not likely used by bass to build nests.

### Discussion

Nesting boxes may be effective for providing artificial habitat for largemouth bass during the spawning season. Box walls should be low for at least 2 sides. Because largemouth bass follow the contour of the bottom, high walls may prevent bass from seeing usable habitat within the box.

The boxes remained in the river during the study. When boxes are modified, they will be placed near piers or similar structure in cooperation with property owners along the Choptank River and possibly the Patuxent River. I hope these owners will take interest in monitoring the boxes for use by largemouth bass in the rivers.



### Acknowledgements

I thank MDNR staff of the Southern Region Office and volunteers of the Maryland Bass Federation Nation (MBFN) for building boxes. I also thank the Maryland Youth Chapter of the MBFN for helping to install boxes in hatchery ponds. I thank the staff at Cedarville Hatchery and Unicorn Hatchery (J. North, D. Sein, D. Pritchett, R. Parsons) and hatchery manager, B. Richardson for implementation and logistics of the study, as well as monitoring of the boxes. I thank J. Stivers (Eastern Region Office) for assistance in placing and removing boxes from the Choptank River.

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